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ABSTRACT

This overview of available technologies and how they can be used in teaching languages is divided into three sections. The first, "Multimedia Inputs," examines digitized multimedia tools and their role in language courses, electronic books, encyclopedias and dictionaries, and games, and takes a closer look at "unimedia" products and audiovisual materials. Tools for oral exercises are reviewed and some examples given, including a computer equipped with headset, microphone, and audio card; CD-ROM; and text, sound, and associated images. Discussion of reading on a computer screen covers electronic books, including books on CD-ROM, some of which can be edited on screen; hypermedia, encyclopedias, and dictionaries; learning by exercises, games, and animation; instructional computer software; educational television, including interactive compact disks (CD-Is), videodisks, and the computer and video. The second section, "Exchange Modes and Places," focuses on uses of communication media, such as long distance dialogs via teletext, electronic mail, and video letters, and the language room as a multimedia resource center providing access to new technologies as well as traditional resources. Under the heading "Methods and Choices," the third section provides guidelines for organizing a language room, including preliminary questions, different starting modes, functioning, equipping a compatible PC, and equipping a Macintosh. (BBM)

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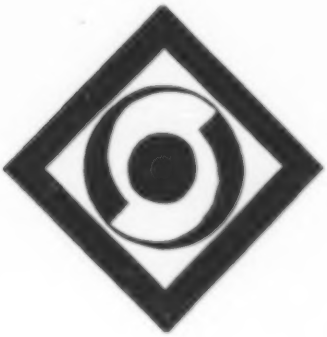

TOOLS FOR LANGUAGE PROGRAMS

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TOOLS FOR LANGUAGE PROGRAMS

1 Multimedia inputs

In the field of language training, multimedia development is most promising and it already offers many great opportunities.

Firstly, there are many multimedia tools available, which offer the user texts, sounds, fixed and animated images, all of them digitized.

Next, audio cards and CD-ROM have entailed a serious quality increase, and at the same time they give the actors the opportunity to develop their skills : the teachers can expand their educational creativity and the students can explore any field they wish without needing school !

Without considering the effects of advertisements, the educational possibilities offered by the technological evolution should be studied, by looking which novelties their functionalities present and by formulating some hypotheses on their role in :

- language courses
- electronic books
- encyclopedias and dictionaries
- games diverted from their first objective...

As educational informatics will not be converted in one day, it will also be useful to take a closer look at "unimedia" products.

Finally, a closer look at the audio-visual materials, -far more traditional in the field of languages- will give the user a better view of their evolution.

1.1 Multimedia tools for oral exercises

The progress in the field of sound and image digitizing, allied to more interaction and more flexible handlings, make it easier for the user to handle the programs in order to learn the oral side of languages.

Although the language teacher has a large scope of texts and sound recordings at his disposal, multimedia tools offer many possibilities : they allow direct and simultaneous access to their different components, by proposing, well-articulated, different communication situations which come close to the real functioning of a language.

1.1.1 From the recorder towards the audio card

A computer equipped with headset, microphone and audio card for sound digitizing is not yet seen as an alternative to the language lab, but it allies flexibility, user-friendliness and work to each individual rhythm and to each different level, it uses all new technologies to encourage individual training of oral comprehension and production.

If combined with the right programs, audio cards allow recording, restoring and controlling sounds in a very simple way.

The same programs make it possible to display the texts listened to, the commands, the exercises, the aids and even the images or animated sequences. It is also possible to join freely the text or image to the sound if needed for the exercises and to give the student a real personal support; it is also very easy to record or to listen without having to manipulate a magnetic tape.

1.1.2 From the diskette to the CD-ROM

Echolangues - to which images are joined - and *Labo* now run under Windows and are available on CD-ROM. CD-ROM allows the storage of texts, sounds, fixed or animated images - even large amounts of data - and is read with a special integrated reader or connected to a computer.

With regard to the learning or deepening methods for languages one should avoid limiting CD-ROM to the image alone. Certain programs on diskette already controlled audio cards, whereas their CD-ROM counterpart is extended to images. Other programs already had images occupying little space, generally drawn, whereas they use the digital sound on CD-ROM. Its function is to increase the size of the data available and interaction.

A good example of this system is given by *L'anglais d'aujourd'hui en 90 leçons* : two CD-ROM's complete - replace ? - the learning books and the audio tapes : recordings of conversations and individual words, grammar and exercises, possibility to record; but no images.

1.1.3 Text, sound and associated images

Once images are associated with texts and sounds, new functionalities are presented in the field of language training.

In this context, rather simple issues, such as the choice between fixed or animated images, photos or drawings have a direct effect on the program concept, on the variety and efficiency of interaction proposed, on the pertinence of the educational principles retained.

If, for example, most programs functioning with audio cards offer the student the possibility to record his own voice in order to compare his pronunciation with that of the example, *Aura-Lang* is the only system which takes the user's pronunciation into consideration, as it is equipped with a speech recognition card.

1.2 Reading on a computer screen ?

The emergence of electronic books, which we leaf through by clicking a mouse, represents an evolution of which the scope can hardly by judged. Four different realizations; aiming at four different age groups may completely change our reading habits.

At present, electronic books for children emerge more and more on the market as well. Two of them, developed according to the same principle and published by Broderbund on CD-ROM for PC or Macintosh deserve particular attention : *Just GrandMa and Me* and *Arthur's teacher trouble.*

1.2.1 "Tell me a story"

On the cover, Arthur proposes "To have the story read to you, click right here" and "To play inside the story, click over there." While the child is making his choice, Arthur is singing and dancing. The child can choose between English, Spanish or Japanese ! That's how the first page of this kind of books looks like ! They are rightly called *Living Books.*

The book next consists of 24 pages, or 12 screens. Just as in any ordinary children's book, a short text is written on top of the "double page", the rest of the page being an illustration.

These books are of course designed for American children, and translation or access to a dictionary is required for other readers. It is however not useless to face our children with Living Books, which have enough motivation power to push our children to listen and to try to understand the short textual elements necessary to understand the story in the book. Moreover, each demanding user, will notice -by simple comparison- that much care was spent on the plot, the interpretation and the realization.

1.2.2 Poetry

Another example, different from the previous one, may even better illustrate the possibilities of electronic books.

Poetry in Motion is not only a multimedia product : a product like this may inverse the movement which made poetry inaccessible and bring it back from what the English word 'Performance' expresses very well. Next to the text, the author is displayed, reading and interpreting his text. The animated video window is rather small and its quality rather poor but it gives poetry however a face, which cannot be said of ordinary poetry written down on a sheet of paper. The user can listen, going back to a certain sentence, click on it, so that the poet repeats it in a loud voice.

1.2.3 Editing on screen

With *Expanded Book* it is not only possible to read, but also to edit.

The Voyages Company offers a catalogue with titles for Macintosh, destined for adults willing to read novels on computer, a portable Powerbook in particular.

In *Expanded Book* the texts are presented like in a real book. The pages are turned, marked, certain sequences are selected and put in bold by one single vertical stroke, notes are made in the margin, words or names selected, information on a certain term retrieved.

1.2.4 The possibility to edit

With *Expanded Book Toolkit* students can create or edit their own books.

Besides the exploration and searching functions mentioned above, *Toolkit* offers the possibility to hide texts, sounds, images and video sequences under a word in italics. Produced under *Hypercard* it contains a number of essential functions taken from wordprocessing and desktop publishing programs, along with elements from hypertext and hypermedia.

Teachers, knowing DTP will notice the particularities of their kind of programs, which offer the students new activities and exchange possibilities.

1.2.5 The book of the film

One could put forward that in this case there is hardly any relation with language training, apart from the fact that *Voyager* offers a list of titles in English.

Suppose that there is only a small difference between an Expanded Book with animated images and the result *A Hard Day's Night's* multimedia version.

The complete film is available on one single CD-ROM and the rather poor quality of the image is excused by the contents and its opportunities.

It is impossible to tell whether the film is accompanied by interactive functions tailored to the texts of the songs and to the script of the film, or whether each written sequence is accompanied by a film sequence : both statements are right.

1.3 Hypermedia, encyclopedia, and dictionary

If the future entails bilingual education, implying that the second languages will be practiced for its contents, students are preparing that future by consulting encyclopedias and dictionaries in foreign languages on CD-ROM.

The first CD-ROM only offered textual data bases. At present, the most advanced in the field of digitizing allow to enlarge them, to have access to written (dictionary pages, quotes, ...), as well as to visual (maps, statistics, graphs, animations, ...) as audio documents (original speeches, music and songs, sounds, pronunciation, ...), to change the access modes and to propose a browsing mode in an environment, necessarily originating from multimedia, considering the scope of the data bases.

1.3.1 Encyclopedia : ever more

Certain CD-ROM offer comments in different languages : *Electronic Library of Art* in English, French, Spanish and German. *Great cities of the World* in English, French and Spanish, and the very beautiful *Composer Quest* in English, French and German, displaying the history of music and proposing to test your knowledge by way of a game.

Other encyclopedias only exist in English, but many different types are available. *Bookshelf* consist of an encyclopedia, four dictionaries, an atlas and a thesaurus. You must have tried it out to understand how attractive a speech by Kennedy or an animation of an erupting vulcan can be. The written text helps to understand the oral comment accompanying the animation. Each sequence (sound and image) can be repeated endlessly.

The new Grolier Multimedia Encyclopedia is a very recent encyclopedia containing 33000 entries, 3000 images with atlas and commented photos, animations illustrating physical laws or the functioning of the human body, diverse machines and the solar system ..., all kinds of recordings, a walk through a "tree of wisdom", or through the history of the world by using the searching functions by date.

1.3.2 Dictionaries : not only the language

It is also possible to be connected to a French, English or bilingual dictionary, to a synonym or quotation dictionary, environments which are often offered on CD-ROM. Word processing functions enable the user to Cut and Paste certain sequences, to reorganize, to summarize, to file and to enhance his knowledge in the field of languages and civilization.

The Longman Interactive English Dictionary, multimedia as well, combines sound, a pronunciation dictionary, a dictionary of mistakes and a grammar book. It also contains illustrations and video.

Beside the simultaneous use with word processing, two totally new functionalities are introduced on the market, which can be used in school :

- the display of video scripts, useful for the language recognition, to create lines from the words of the script by using the links with the dictionary.
- the collection of words the teacher creates by grouping the words of one theme which are linked so that the students can learn from it, while avoiding "over-browsing".

1.4 Playing by learning

Following Carmen San Diego throughout the world or inquiring with Sherlock Holmes at your side, implies to understand your interlocutor, to get used to his voice and accent in order to gather the indications and bring the whole to a good end.

Motivation is of major importance in language training. Certain students are however rather discouraged at the end of an educational computer session. It would be a pity if they found themselves in the same boring situation we wanted to avoid by changing the learning methods.

Certain producers have found the solution by offering programs which amuse the students by learning. These systems help the teachers to improve their skills in the computer course and the parents who want to learn as well. This explains why non-multimedia auxiliary programs have appeared on the market : ADI, for example, emphasizes learning by exercises, games and animations.

Direct the activities of Holmes and Watson in three different and independent sequences. All indications are offered orally, thanks to interviews (filmed professional actors, video and digital sound).

It is beyond doubt that listening and understanding is necessary to find the solution !

During the 80's many different role playings emerged on the market. Very famous is the game *Donjons and Dragons* based on the mythology of Tolkien, or the "books in which you are the hero" which offer an exceptional escape possibility. A very interesting exercise in a language course is undoubtedly a play in which the students are the actors. From this point of view, its computer counterpart is very interesting as well. Many programs are adventure games in the shape of a role playing : the user *becomes* the hero of the game which evolves during the adventure. There is immediate interaction between the user and the screen and this interaction is intensified by the computer's audio dimension.

At present, more and more products of this kind are appearing on the market, thanks to CD-ROM and its high storage capacities (images and digital sounds take many space). Most of them are launched simultaneously on diskettes, to be installed on a hard disk.

This kind of product is of great educational value : the sound sequences can be listened to endlessly : there are as many activity rhythms as there are computers equipped.

How to choose a game ?

Carrier : a game on diskette costs about 50 US $ and has to be installed on hard disk. A CD-ROM costs between 50 US $ and 100 US $. Their purchase is merely justified by their richness and user-friendliness.

Catalogues issued by the production companies and lists available at the retail sales give a global view of what is available on the market.

If you think you have found an interesting offer, please check if it is not :

- a simple graphic adventure game in which the user only has to advance a character on the screen by simply manipulating the arrows or by clicking on symbols
- a game that consists of killing as many enemies as possible by manipulating a joystick
- a round game on computer (e.g. Monopoly) which has hardly any linguistic value.

To avoid the wrong choice; please read the enclosed manual, look at the illustrations of the screen and ask a demonstration or a conversation with a well-informed shop-assistant.

Installation on a network demands special attention : as to the sound, some CD-ROM can be shared, which avoids the purchase of one CD-ROM per computer, although this sharing often implies very slow access to the program. Please remember that from the legal point of view, only one network version may be installed on a network !

1.5 Educational programs before multimedia

Schools which have not enough means may do with a traditional computer room equipped with a range of "classic", but efficient computer programs.

However attractive and inviting, the new language learning programs have an important economic dimension as well. Many schools have no opportunity to renew their current equipment. The existing equipment has to be used : a computer room without CD-ROM. This equipment can however be useful !

An equipment dating from the 80's refers to an educational adventure typical for a decade that is now coming to an end.

We must admit that much perseverance and fighting spirit was needed to get across a number of impediments : organizing and managing the class in small groups, resolving technical problems caused by the material failing from time to time, taking a place on the planning, in other words claiming the computer in the scope of language teaching.

Unless hesitation, reluctancy and failings, this introduction in the world of computers in the language course gave the teachers the opportunity to get familiarized with a new learning and teaching method. It gave both the teacher and the student a new role in the learning process.

Although the computer may not be seen as a learning aid for students with difficulties, the computer in the language course offers an answer to the problem of heterogeneousness, typical for today's schools.

Each student works at his own rhythm, according to a suitable program. He develops his linguistic abilities (deepening and structural training, comprehension, written and oral expression, ...), while developing concentration and rigour through different problem solving situations. He can also develop more neutral situations, thanks to the neutralization of the affective parameters which can now be blocked. "With the machine, mistakes can be made".

Direct, personal and extended contact with the language to be learned can finally be established.

Thanks to an increase of the access modes and systems to the linguistic knowledge, the computer both is a new teaching and learning method.

1.6 About the television

Being a traditional partner in language courses, the VCR is developing along with the computer, according to an inverse order. The computer is extending its audio and image capacities, whereas the VCR tries to develop the strength of the computer interaction. This exchange of functionalities logically entails the introduction of new products demanding a specific use.

1.6.1 CD-I : a recent evolution towards language training programs

CD-I is an interactive compact disk linking digital quality sound to texts, images and animated video. To read a CD-I, a CD-I player is required, connected directly to a TV. A CD-I player allows however to play audio CD's and Photo-CD's as well.

Philips Language Learning System wants to take advantage of the possibilities interaction offers. The educational course consists of short animated sketches drawn in a childish style, so as to make the adult student feel like a child in the target language. Different accesses to one single sequence allow the student to conceive the situation before replacing it in its context in order to get to the details : MCQ's (multiple choice questions) partly based on digital photos bringing more authenticity make it possible to have access to the sound alone, where small sentences are replaced in the context of a conversation.

1.6.2 Educational applications of the videodisc

The laser videodisk is a very flexible instrument which can be used easily in the class room, on condition that it meets the *Active Play* standards : the teacher must at any moment have direct and immediate access to the indexed images available on each disk.

Thanks to the multiple operating configuration many different educational approaches are possible.

By handling the videodisk player and its remote control, the teacher can activate the image and data base. By giving the remote control to certain students interactive exchange from the different videodisks is possible. Data retrieval is facilitated by the function fast scanning. Moreover, direct access to pre-cued sequences makes communication between the students relatively easy.

Educational applications based on this basic configuration sometimes urge a reorganization of the class room in order to make oral communication possible or to exercise by hiding certain aspects : it is advisable to divide the class in sub-groups receiving different information (images, sounds, sounds effects, ...) and to use the functions pause, fast scanning and audio from the remote control.

By using overhead projection, the teacher controls the course from his computer. Moreover, the combination of a video player and a computer also facilitates the individual work of the students, both if they work according to modules or according to a differentiated educational model. Hence, each student will have to do guided research on the United Nations or to study the vocals of the original version of a song, according to his own rhythm.

Language training centres have videodisk players at their disposal connected to a computer equipped with an inlay and an audio card. This configuration is far more complex (and expensive) and often used for professional linguistic training of staff in companies. Unfortunately, in the field of general public videodisks only a few are designed for educational purposes. If this situation remains the same, mixed optical carriers will soon be replaced by CD-ROM and other digital systems.

1.6.3 Computer and video

CAVS (Computer Assisted Video System) allows to operate a recorder by keyboard or mouse actions. Contrary to what one might think, assisted does not refer to "assisted users" but the users who are becoming increasingly autonomous in their computer handling.

The Foreign Languages and Television Centre of the Burgundy Centre National de Documentation Pédagogiques[1] produces video tapes and computer exercises (or modules, 15 available today). They are available in English, German, Spanish and Italian and consist of sequences taking 1 to 5 minutes.

Although a magnetic carrier is not as flexible as a laser carrier, CAVS makes the study possible of authentic documents available in many schools.

In tutorial mode, the computer exercises offer the student the opportunity to view the sequences as many times as possible, by the function rewind. You have access to use help screens (records) and a dictionary, necessary to make the exercise (MCQ, key words, sorting and capture). Help records and *** offer a cultural and linguistic richness.

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[1]National Documentation and Education Centre

In creator mode, it is very easy to modify the existing modules or to create new ones.

CAVS respects each individual working rhythm and the flexibility of the modules, it offers personal progress perspectives for each person willing to complete his general knowledge or to deepen his study of a living language.

2 Exchange modes and places

Multimedia implies the integration of communication media in the complex world of computer-video in which language training is working its way through as well. Language training is now abandoning the class room and entering foreign television services, such as teletext. And why not getting in touch with foreign correspondents via *international telematics ?*

All these activities demand specific locations, necessary for many other reasons as well. The presence of multimedia products on the market, the introduction of foreign television channels through cable or satellite connections force the teachers to show interest in other media than the school books. The students like to work with different medias in the language course and during their study. That is why more and more schools are now creating *language rooms* of which the objectives and working principles have to be known.

It is often very difficult to make a choice between the different materials available : Local Language Resource Centre offers training sessions to get familiar with those new technologies and may be of great help to teachers and principals. The Centre provides video products or interactive video, explains how a computer works with speech recognition cards and CD-ROM or CD-I player, which is very useful.

2.1 The use of teletext in language training courses

Converting a product into another language or a computer game into an educational tool both are attainable procedures. But what about taking advantage of the television for written productions... Practical explications and statement... .

- Training the students to understand authentic texts in direct communication with information on the country of the target language :
  - * on condition that support is available to make the texts understandable which have not been written for educational purposes and which cause comprehension problems,
  - * on condition that the students are given specific working instructions, which give them an overall view on the text so that they can continue reading the text without having to stop or hesitate at each difficult word or sentence.

- Reviving the students' interest for literature, by urging them to read press articles related to audio-visual documents of the television news
  Thanks to teletext they have the opportunity to inform themselves in real time on the most diverse subjects. In this way a foreign language is no longer considered as a learning object, but rather as a concrete communication object.
- Making the students more independent, by giving them access to information sources, for example in a media library.
  The students are motivated very much, as they are free to choose which text they will study. Experience has learned that they opt for documents corresponding to their own level, their field of interest and their personal life.

2.2 Long distance communication

For students to whom a foreign language remains "foreign" from different points of view, the electronic evolution reinforces educational communication and takes it outside the class room and makes exchange between students possible, finally developing the students' written capacities.

Although much time is spent on oral communication during the language course, the effort of many students to talk in a foreign language does not offset the poor result. Electronic mail offers the student however an excellent tool for comprehension and written production. It contains authentic documents, to be distributed easily among the students and it makes long distance dialogues possible for which good knowledge of a language is required.

Personalized exchanges

Electric mail, an instrument with many exchange possibilities, is more interesting for its capacities than for the information that is exchanged. Installing a telematic device only to exchange recipes published in any cookery book does not seem a very profitable investment.

The difference consists however in the fact that one can opt for one particular recipe, tailor it to one particular group of students or even to one particular student and arousing the addressee's interest to read, understand and answer in the frame of a project.

To support a project

To make personalization of exchange a major asset, it has to be linked to a collective activity. This avoids the telematic exchanges to be reduced to binary correspondences, possible source of deception as the content of the messages is generally not richer than in a traditional correspondence. Moreover, the messages often arrive late or hardly meet the students' expectations. It is hence of major importance, - without changing this personal dimension -, to include them in an overall project, well-defined in the beginning of the year according to a precise calendar in consultation with the telematic correspondents.

A trans-disciplinary tool

To develop, the exchange does not have to become the lion's share of the language course. Each partner has to find its educational partner. The study of the message comprehension and the cultural references takes for example place in the English course, whereas research and composition happen for example in the French course. Capture, dispatching and reception of the messages are reserved to the technology course.

Telematics and video

Parallel exchange between video letters may also reinforce the links created through telematics, both from the students' and from the teacher's point of view. As to the students, it is a different way to discover their correspondent's life, as to the teacher, video favours comprehension and oral exercises, as it demands a rather collective approach.

2.3 The language room in schools

In a school, the language room can be considered as a multi-media resource centre. Its topological organization differs dramatically from any ordinary class room. It covers the auxiliary tools for language training, which are at the students' and teachers' disposal so that they can work individually during the modular sequences.

The renovation of secondary schools, along with the introduction of new technologies in schools sometimes entails a decompartimentalization of the different subjects, team work, new usages and interlanguage projects the teachers often wish to be implemented through an adaption of the resources to the educational exploitation of television documents, foreign television emissions captured by satellite and computer tools.

A multi-resource room

Many resources imply multiplication and complimentarity of the media : traditional documents which may be consulted, such as press articles, dictionaries, documentary files, bilingual or monolingual issues, audio library, and above all much room for new computer and communication technologies in order to facilitate the integration of these new tools in class or for individual study : VCR's (monitor and player), tools for satellite links, multimedia computers, both with sound cards used in labs for interactive languages and equipped with a multistandard CD-player.

An environment to conceive

In the language room the student can tailor his study to his objective : he can use his own material, or the teacher fixes the educational environment.

Why ? The choice of tools and material respects the fact that different learning methods are possible, or different ways to study a document, to approach and learn a subject; pertinent use of tools stimulates the student, attracts his attention, invites him to explore and pushes him to become the actor of his training.

"Direct broadcast" image and language

We all know the facilities offered by the town's cabled network or satellite links to study languages : receiving direct broadcast foreign television channels, listening to a language "direct broadcast", deepening the culture of the country studied.

Collective activities

Thanks to the computer, new applications are now introduced in the class room, both for team work and for individual exercising at one's own rate.

As to the team work, computer tools and multimedia offer the possibility to apply a differentiated teaching skills - an adapted approach of the heterogeneousness of the group, autonomy, evaluation, correction - and to make variation in the course more easy.

"Self-service tools"

Self-teaching through self-service tools allows a student to study at his own rate, according to his time available, both to resolve a problem and to deepen his knowledge.

3 Methods and choices

3.1 Organizing a language room

The new technologies for language training are based on three essential elements : material media, an organization and many teaching skills. These three elements have to be taken into account from the very start till the end of the organization of the language room.

It would be regrettable to choose either for material becoming very soon obsolete or for very performing material, thinking that computer skills are acquired automatically, or without acquiring the abilities needed to renew the learning conditions.

3.1.1 Preliminary questions

Definition of the needs : equipment and training

First, the needs have to be defined. How many investments decided upon by the decision-makers, such as the State, local authorities and principals have not been criticized, even rejected by the teachers because they did not meet their expectations. The teachers are the best persons to think about the target group of a project : their students. Motivated language teachers will find the possibilities to gather a team organizing an educational project adapted to their environment : this will often be the beginning of a number of changes both in their practise and in their educational strategies. This explains why the definition covers equipments, changes in the organization of the training locations and continuous teacher training.

The introduction of new technologies has completely changed the relation between the teacher and the students. Instead of a teacher in front of the class room we now have a team in front of training youngsters. This situation has fundamentally renewed the training sociology, including many possible implications on the relationship teacher-student, on the behaviour of the young student towards the training and his personal project in particular. The teacher is obliged to differentiate and to individualize his approaches.

Organizing the location

All the above-mentioned moves imply that material difficulties have to be avoided. The class rooms have to be re-studied in flexible sectors with functional zones adaptable to different modules : the geographical location of the language classes and the assignment and equipment of multimedia material have to be taught seriously. A structure offering possibilities both parallelly and complementary to the class room is of course very attractive: it is the language room.

School project

Such a project can of course only be carried out if it is part of a school project and supported by an entire team : language teachers, external assistants, administration school management.

If the project is accompanied by considerable financial support, it may be advisable to establish a user's partnership : initial and continuous training.

Financial partners and project presentation

The financing of a project is based on a partnership as well : privileged investors such as the State and local authorities, regional and general councils can be taken over by partners from the private or public sector.

Each authority defines a policy and orientations. It is hence of major importance to be informed on their priorities.

It is however not necessary to stick to those orientations : it is not necessary to renounce a project or to leave it pending ... because it does not correspond to the priorities of that moment. The way in which the project is presented will however be different. Experience shows that priorities can be changed in accordance with the importance of an innovative project.

Capabilities available

The team launching the organization a language room will have to collect all capabilities the school counts : technician, adviser-coordinator, librarian. Each point of view will have to be taken into account : educational, technical and it may be very useful to question certain issues in advance, such as maintenance.

3.1.2 Different starting modes

The language room and future prospects

If a language training centre is conceived for educational purposes, an installation budget will be needed covering the initial configuration choices, the successive investment steps and the priority needs.

We are in favour of gradual investments as this system will certainly entail time to think about the project and to make the project evolve.

Regular visits to academic training centres will allow the teachers to remain informed on the novelties.

Functioning budgets

A functioning budget has to be foreseen as well. The documentation bases have to be updated annually, so that the students can develop their skills by consulting current documents : reading comprehension by reading magazines, novels and novellas in a foreign language, oral comprehension by listening to audio tapes, by viewing video tapes or television emissions. The use of the computer will develop and reinforce the students' skills : CD-ROM applications or guided training through specific programs. This training system implies however the purchase of new documents, VCR's, programs, CD-ROM, up-dating, subscriptions, consumables (blank tapes and diskettes, print cartridges, etc.) and possibly a subscription to the tele-distribution network, maintenance contracts for the computer and audiovisual installations.

To be remembered

Last, but not least :

- teacher training
- the study, choice, purchase, processing, document production - whether or not didactic
- agreements on the television emissions to be recorded
- cataloguing : creation and updating of index cards, information on the cataloguing system, creation of a file covering the existing resources
- recordings and transcriptions : making and filing the transcriptions, creating educational documents accompanying the audio and video tapes
- a copy for internal use in case of exchange or lending.

3.1.3 Functioning

Consultation by the users

In the language room, each student works at his own rate, with documents chosen by himself and if necessary he can - voluntary or sent by his language teacher - ask the assistance of a teacher available at that moment.

In order to improve accessibility, the language teachers can organise an initial consultation of all users and gather information on their needs, their adaption possibilities and obvious material difficulties.

Follow-up

If the activities in the language room are followed up, its functioning and success will be guaranteed. A follow-up implies that problem areas have to be detected, that technical difficulties have to be resolved (occupation planning, security, breakdowns, damages), information problems (access to documents, operation instructions, functioning cards and suggestions, ...) have to be explained. Next to technical difficulties, a number of educational problems may emerge as well : users's profile, training mode, the relationship between team work and working in a language room. Organisational obstacles may arise as well : filing, arrangements to make sure that documents and materials are placed back where they belong, supplying of didactic and non-didactic material and consumables. Evidently, a number of competent persons have to be available, such as people with language skills, a librarian and a technician. Their function is to intervene when a problem arises.

3.2 Equipping a compatible PC

Although CD-ROM and audio cards offer enticing teaching and learning methods, they are very rare in schools. It will hence often be necessary to purchase material in order to complete the existing PC's. Hereafter you will find some advice which may help you to make your choice or to avoid some mistakes.

From the first IBM-computer now 10 years ago, a whole family of PC's has been developed. The progress in electronic components and the opening-up to many manufacturers all over the world have entailed both for the PC and its peripherals (printers, graphic cards, disks, ...) a serious evolution of the material and dramatic price decreases. In the field of software, the same evolutions have caused serious quality increases and a large range of programs.

This evolution has however a counterpart : each manufacturer has to compose with a device and an operating system of which the foundation is about 10 years ! The installation of an extension or the software in itself is not always that simple. Most problems arise when one tries to equip a computer of brand A with a drive of brand B, a sound card C, whereas the whole has to run program D.

Each constructor guarantees that his product is "compatible", but very often parametres or adaptors are necessary and the final user is faced with numerous installation difficulties.

It is hence advisable to explain the user which problems he may be faced with.

Multimedia configurations - ready made

Recently, some PC constructors and wholesalers have offered configurations, called "multimedia", directly equipped with a CD-ROM player, a vocal card, even boxes or integrated microphone. One might think that this kind of products facilitates certain equipment problems. The material equipping multimedia configurations have however to meet the requirements of the applications viewed. Moreover, some wholesalers assemble those devices with down-market material, as their target group is more interested in video and computer games.

CD-ROM players

CD-ROM players are directly derived from the ordinary CD-player. Contrary to other computer devices, CD-ROM players have undergone many changes in very little time. Today, one must imperatively opt for a XA, compatible with a multisession Photo CD. It is even advisable to opt for a model with speed doublers, which - in exchange for a small price difference - is compatible with a MPC2, developed by Microsoft for multimedia purposes. This kind of characteristic or performance differences do not really influence the price of a CD-ROM player. Its price is rather influenced by the quality differences and the commercial policies followed by the constructor concerned.

A CD-ROM player can be external, with its own box and electric alimentation, or internal, to be installed where a disk drive is normally placed. In one of the PC's extension slots an interface board has to be placed and connected to a CD-ROM player. This card can only be used thanks to program extensions placed on the PC's hard disk.

The installation of such a configuration is far from being simple and problems of incompatibility - not very frequent- may be caused by other equipments already present in the computer (network card, ...). We can only advise to follow the installation prescriptions strictly, hence favouring the suppliers adding detailed documentation. Test service programmes are sometimes added to those materials, developed to help the user choose certain parameters (IRQ, input/output ports).

Audio cards

There exist some sound extension models to connect directly to the PC's printer output, but they are of minor quality compared to the models placed inside the device : vocal cards.

Just as far the CD-ROM, the physical installation of the device in a PC's extension slot goes along with a software installation from the floppy disks supplied by the constructor. Here it is most interesting to opt for those products accompanied by detailed explanation.

If you need to install many different cards in your computer it may be reassuring to hear that certain constructors offer packages consisting of a vocal card, a CD-ROM, an interface and its connection to be placed directly on the audio card itself. This packages have four advantages :

- lower cost price of the package
- less incompatibility risks
- installation limit to one card
- simultaneous installation of the software, which guarantees the cards' and the CD-ROM player's functioning.

Installation of the software on CD-ROM

Here too, the evolution of installation procedures has been under the responsibility of software producers, each adding his personal touch or additional tapes ...

It is impossible to supply general information on the installation and introduction procedures of applications running under MS-DOS. This implies we are confined to the information given in the documentation and hope we will bring it to a happy end!

Things are much more simple for products under Windows, as its systems are partly standardized. Whether the programs are supplied on disk or CD-ROM, the user always has to start from a program on the disk, generally called INSTALL. EXE or SETUP. EXE, which is then responsible for the rest of the installation copy and back-up procedures. If everything goes well, any application can be opened by simply clicking on an icon.

3.3 Equipping a Macintosh

General rule : there is no need to install a sound device on a Macintosh, as it is already done.

Peculiarity : the installation - if necessary - of a CD-ROM player and software does not pose any problem.

Macintosh micro-computers differ very much from other PC's, as its components are produced by one single constructor : Apple, who controls its own evolutions itself. As soon as it was possible to install sound components on a computer, Apple has supplied them as a standard accessory on certain models. The same goes for CD-ROM players.

If you still have a Macintosh with no standard CD-ROM, it is very easy to install one. If a place is foreseen inside the computer, some tinkering is needed to install the CD-ROM player and to connect it to the right cables. The installation of an external player is however very simple : the device has to be connected to the Macintosh, by respecting the instructions on the player's numerisation and by launching the service program supplied on a diskette.

Application software on CD-ROM can be started up very easily. The contents of CD-ROM appear on the disk as if it was a diskette or a hard disk; it is started up by a simple double clicking on the application icon.